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Evaluation of Melatonin Prescribing in a Tertiary Level Health Institution of Queensland

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Abstract

Objectives: There were two key aims of this thesis. The first aim was to identify the current knowledge gaps on the efficacy and safety of melatonin treatment in paediatric populations, and to assess the adverse drug reactions in those patients taking melatonin, by conducting a literature review. The second aim was to evaluate the pattern of melatonin prescriptions, as well as melatonin efficacy and safety in paediatric at the paediatric respiratory and sleep unit, Mater Children's Hospital, Raymond Terrace, South Brisbane, Queensland.

Materials and methods: For the first aim, a literature review study was performed, which required searching the databases PubMed, MEDLINE, and the Cochrane Database of Systematic Reviews from 1958 to present day (September 2013). Only English-language human (RCTs) for inclusion, which had to be on children from 4 months to 18 years of age.

For the second aim, a chart review study was conducted by retrieving the charts of children who had melatonin dispensed to them by Master Pharmacy Services between 2005 and 2013.

Results: For the literature review study. No significant adverse effects of melatonin treatment were observed in these studies. However, longer follow-up studies and larger sample populations are needed.

For the chart review study, the effectiveness and tolerability of melatonin was assessed in 113 children. The average effective dose of melatonin in all groups was 3.76 mg, usually administered 30 minutes to 1 hour before bedtime. Some adverse effects were observed, such as drowsiness, hyperactivity, or constipation; however, these were not common and mild. Thus, melatonin may be effective, safe, and well tolerated in the treatment of chronic insomnia in children.

Conclusion: The literature review suggested that existing studies show some efficacy of melatonin in treating sleep disturbances with few side effects; this finding was confirmed and supported by the retrospective chart review.

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